

PHASING DIAGRAM												
	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 2	G	G	R	R	W	W	W	W	DW	DW	DW	DW
2 PED. CLEAR	G	G	R	R	FL DW	FL DW	FL DW	FL DW	DW	DW	DW	DW
2 CHANGE	Y	Y	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	G	G	DW	DW	DW	DW	W	W	W	W
4 PED. CLEAR	R	R	G	G	DW	DW	DW	DW	FL DW	FL DW	FL DW	FL DW
4 CHANGE	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPTION A	G	G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
A CHANGE	Y	Y	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPTION B	R	R	G	G	DW	DW	DW	DW	DW	DW	DW	DW
B CHANGE	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

**SIGNALS**

1,2,3,4

R

Y

G

12"OPTICAL PRE-EMPTION DETECTOR EYE

5,6,7,8

9,10,11,12

Pedestrian

12"

13,16

ONE WAY

R6-1(L)36" x 12"

15

Jonathan St

D3-2Var. x 16"

17,20

ONE WAY

R6-1(R)36" x 12"

18

W. Washington St

D 3-2Var. x 16"

**SIGNS**

14,19

NO TURN ON RED

R10-11b24" x 24"

17,20

ONE WAY

**INTERSECTION DESCRIPTION**

I. GENERAL

THIS INTERSECTION IS U.S. 40 EAST (WEST WASHINGTON STREET) AND SUMMIT AVENUE/JONATHAN STREET. CONSTRUCTION AT THIS INTERSECTION INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AND INTERCONNECTION WITH THE OTHER SIGNALIZED INTERSECTIONS IN THE NEW CITY-WIDE SYSTEM. IT IS ASSUMED THAT U.S. 40 EAST (WEST WASHINGTON STREET) RUNS IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA TWO (2) PHASE PRE-TIMED MODE. EASTBOUND U.S. 40 EAST (WEST WASHINGTON STREET) AND NORTHBOUND SUMMIT AVENUE WILL OPERATE IN SEPARATE PHASES. PEDESTRIAN SIGNALS WILL OPERATE CONCURRENTLY WITH THE EASTBOUND U.S. 40 EAST (WEST WASHINGTON STREET) PHASE. PEDESTRIAN SIGNALS WILL OPERATE CONCURRENTLY WITH THE NORTHBOUND SUMMIT AVENUE PHASE.

PRE-EMPTION ON EASTBOUND U.S. 40 EAST (WEST WASHINGTON STREET) WILL CALL PRE-EMPTION A. PRE-EMPTION ON NORTHBOUND SUMMIT AVENUE WILL CALL PRE-EMPTION B.

A NEW EIGHT PHASE FULLY ACTUATED CONTROLLER TELEMETRY MODULE AND PRE-EMPTION HOUSED IN A GROUND MOUNTED CABINET WILL BE INSTALLED.

**A/E GROUP, INC.**

ENGINEERS • PLANNERS

181 E. Main Street

Westminster, Maryland 21158

A/E Job No. 95-289

**NEMA PHASING**

**PHASING NOTES:**

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY

2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY

EQUIUPMENT LISTS				
A. EQUIPMENT TO BE SUPPLIED BY THE SHA.				
ITEM NO.	QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
9003	1	EA	SP	BASE MOUNTED LOCAL CABINET (SIZE 5) LESS DETECTION EQUIPMENT WITH 8 PHASE ASC II CONTROLLER WITH TELEMETRY AND OPTICOM PRE-EMPTION MODULE
9006/9007	42	SF	813	FLAT SHEET ALUMINUM SIGNS CONSISTING OF: - 2 EACH R6-1L (36" X 12")-POLE MOUNT - 2 EACH R6-1R (36" X 12")-POLE MOUNT - 2 EACH R10-11b (24" X 24")-MAST ARM MOUNT - 1 EACH D3-2 (W. Washington St) (VAR." X 16")-MAST ARM MOUNT - 1 EACH D3-2 (Jonathan St) (VAR." X 16")-MAST ARM MOUNT

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.				
QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION	
5	CY	205	TEST PIT EXCAVATION	
18	CY	206	REMOVAL OF EXISTING SIDEWALK	
250	LF	SP 555	12 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE	
60	LF	SP 555	24 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE	
250	LF	SP	REMOVE EXISTING PAVEMENT MARKINGS--ANY WIDTH	
1400	SF	610	4 INCH CONCRETE SIDEWALK	
90	SF	SP	REMOVE AND REPLACE EXISTING BRICK SIDEWALK	
1	EA	816	INSTALL CONTROLLER AND CABINET--BASE MOUNT	
42	SF	813	INSTALL OVERHEAD SIGN	
4	EA	SP	FURNISH AND INSTALL 12 INCH 1 WAY 3 SECTION (R, Y, G) SIGNAL HEAD HAVING PROPER ADJUSTABLE MAST ARM BRACKET, AND TUNNEL VISORS--PAINTED BLACK	
2	EA	SP	FURNISH AND INSTALL 12 INCH 2 WAY 2 SECTION PEDESTRIAN SIGNAL HEAD--PEDESTAL TOP MOUNT--PAINTED BLACK	
2	EA	SP	FURNISH AND INSTALL 12 INCH 2 WAY 2 SECTION PEDESTRIAN SIGNAL HEAD--SIDE POLE MOUNT--PAINTED BLACK	
2	EA	SP	FURNISH AND INSTALL OPTICOM DETECTOR EYE--MODEL 521	
6	EA	811	FURNISH AND INSTALL ELECTRICAL HANDHOLE	
10	CY	801	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION	
175	LF	805	FURNISH AND INSTALL 2" SCHEDULE 40 RIGID PVC CONDUIT--TRENCHED	
40	LF	805	FURNISH AND INSTALL 4" SCHEDULE 40 RIGID PVC CONDUIT--TRENCHED	
100	LF	805	FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT--SLOTTED	
15	LF	805	FURNISH AND INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT--SLOTTED	
1	EA	807	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT	
1	EA	SP	FURNISH AND INSTALL 27-FOOT STEEL POLE WITH A SINGLE 38-FOOT MAST ARM--PAINTED GREEN	
1	EA	SP	FURNISH AND INSTALL 27-FOOT STEEL POLE WITH A SINGLE 50-FOOT MAST ARM--PAINTED GREEN	
2	EA	SP	CUT, CLEAN AND CAP TRAFFIC SIGNAL STRUCTURE	
1	EA	SP	AS-BUILT FOR TRAFFIC SIGNAL	
2	EA	806	FURNISH AND INSTALL 250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTOCELL	
1	EA	SP	FURNISH AND INSTALL 10 FOOT LIGHTING ARM ON SIGNAL STRUCTURE--PAINTED GREEN	
1	EA	SP	FURNISH AND INSTALL 15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE--PAINTED GREEN	
5	EA	804	FURNISH AND INSTALL GROUND ROD--3/4 INCH DIAMETER X 10-FOOT LENGTH	
200	LF	810	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	
150	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE--1 CONDUCTOR (NO. 4 AWG -- THHN/THWN)	
850	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE--5 CONDUCTOR (NO 14 AWG)	
350	LF	810	FURNISH AND INSTALL 2--CONDUCTOR TRAY CABLE (NO 12 AWG)	
2	EA	SP	FURNISH AND INSTALL 10-FOOT BREAKAWAY PEDESTAL POLE--PAINTED GREEN	
350	LF	810	FURNISH AND INSTALL OPTICOM M-138 DETECTOR CABLE	
2	EA	SP	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12" BELOW GRADE	
1	LS	SP	DELIVERY OF SALVAGED EQUIPMENT	
1	LS	SP	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	
1	LS	SP	REMOVAL OF EXISTING SIGNAL EQUIPMENT TO BE SALVAGED	

**NOTE:** ALL EQUIPMENT AND/OR MATERIALS TO BE REMOVED BY THE CONTRACTOR, BUT NOT LISTED BELOW, SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

QUANTITY	UNIT	DESCRIPTION
1	EA	CONTROLLER AND CABINET
2	EA	OPTICOM DETECTOR EYE

UTILITY LEGEND		
	G	GAS MAIN
	W	WATER MAIN
	S	SEWER MAIN
		STORM DRAIN
	TV	CABLE TELEVISION
	E	ELECTRIC CABLES
	T	TELEPHONE CABLES
	A	AERIAL CABLES

**MDOT - STATE HIGHWAY ADMINISTRATION**

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

LOG Ml. 21E04035.93

DRAWN BY: M. GESELL

DES. BY: J. LAWRENCE

CHK. BY: \_\_\_\_\_

**US 40 East (West Washington St.) at Summit Ave./Jonathan St.**

COUNTY: WASHINGTON

DATE: 05/30/97

SCALE: 1" = 20'

F.A.P. NO. STPG-218-1(7)E

S.H.A. NO. WA9535185

TS NO. **3690**

SHEET NO. 30 OF 66